

2010
NORTHEAST REGIONAL
REDFISH SYMPOSIUM



NOVEMBER 4, 2010

CROWNE PLAZA HOTEL
DANVERS, MASSACHUSETTS USA

2010 NORTHEAST REGIONAL REDFISH SYMPOSIUM

**WELCOME
TO THE
SYMPOSIUM**

NOVEMBER 4, 2010
CROWNE PLAZA HOTEL
DANVERS, MA USA

INTRODUCTION TO THE SYMPOSIUM

Welcome to the Town of Danvers, to the City of Greater Boston, and to the International Symposium: 2010 Northeast Regional Redfish Symposium



Acadian redfish have supported a substantial, U.S. domestic, commercial fishery in the Gulf of Maine and on Georges Bank since the 1930's. By the mid-1950s, redfish stocks throughout the Northwest Atlantic were heavily exploited and total landings began to decline. While landings from the Gulf of Maine increased temporarily during the late 1970s, they further declined throughout the 1980s and 1990s. Because of this decline, there has been no significant, directed fishery, for Redfish in the Northeast U.S. for nearly two decades. However, given the current positive status of redfish stocks and recently introduced fisheries management practices, new opportunities are emerging to restore New England's traditional fishery. A renewed Redfish fishery could provide much-needed financial opportunities for fishermen but with these opportunities come with many responsibilities including the need for development of sustainable harvest practices.



The goal of this symposium is to synthesize the state of our knowledge regarding the biology, ecology and population dynamics of various redfish species. We will review management measures in place in other countries and will review the status of bycatch and discard including bycatch reduction and other conservation strategies related to sustainable fishing. Finally, we aim to make recommendations to guide future biological research, development of innovative and selective harvest practices, and the development of new and effective market strategies. The City of Greater Boston – of which the Town of Danvers is a part – has a long history of commercial fishing, seafood processing and shipping. Boston continues to support a vibrant fishing industry and to be a hub of education, scientific research and innovation.

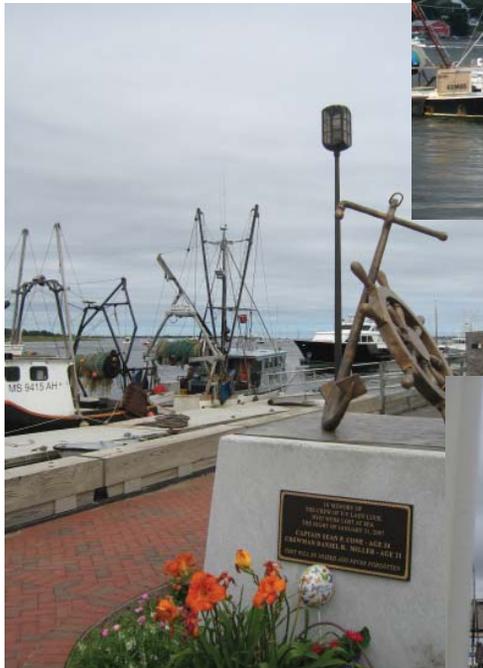


The steering committee extends a very warm welcome to this special symposium. We thank you for all your many contributions and hope you enjoy your participation at this special one-day event.



A handwritten signature in black ink that reads "Chris Glass".

Christopher Glass
On behalf of the Conveners and the Steering Committee



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Photo by Adam Baukus, GMRI

Таблица 36



http://dic.academic.ru/dic.nsf/dic_biology/

2010 REDFISH SYMPOSIUM STEERING COMMITTEE

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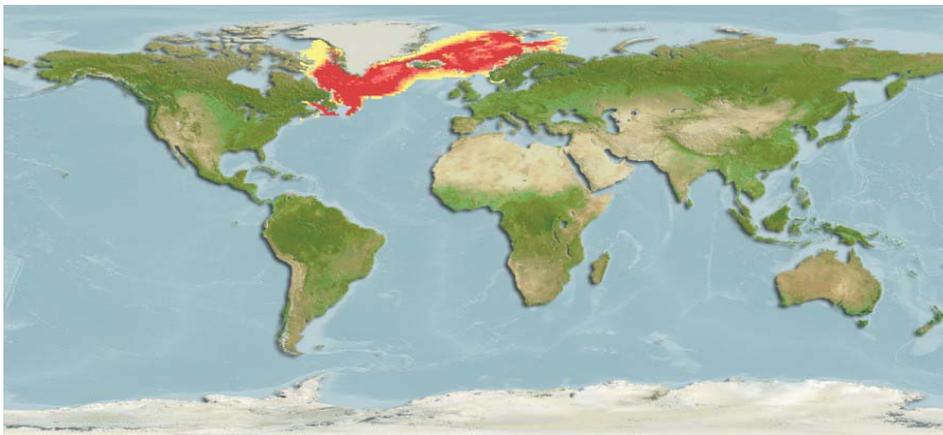
LAURINDA SOUSA SMITH, SYMPOSIUM COORDINATOR - NORTHEAST CONSORTIUM

2010 REDFISH SYMPOSIUM KEYNOTE SPEAKERS**DR. KRISTJAN KRISTINSSON, MARINE RESEARCH INSTITUTE; REKJAVIK, ICELAND**

Kristjan Kristinsson is a research scientist at Marine Research Institute in Iceland. He has been working at the MRI since 1994. His primary research work lies in the stock assessment of redfish species in Icelandic waters and adjacent waters, advice to the government and the stakeholders and general research on biology of the species. Kristjan is also coordinator of one of the two groundfish surveys conducted annually in Icelandic waters. Kristjan did his BSc in biology in the University of Iceland and MSc with Dr. Ransom A. Myers at Dalhousie University in Halifax, Canada.

DR. ALEXANDRA VALENTIN, DEPARTMENT OF FISHERIES AND OCEANS; MONT-JOLI, CANADA

Dr. Alexandra E. Valentin has just completed a postdoctoral research on redfish at the Department of Fisheries and Oceans (DFO) in Mont-Joli (QC) Canada. Born and raised in Switzerland, she got a bachelor degree in biology at the University of Geneva in 1996. She moved to Canada for her graduate studies; her master (1999) and doctorate (2006) are in Oceanography, from the Quebec University in Rimouski (UQAR). From 2006 to 2010, she held two consecutive postdoctoral positions at the DFO. For the last 13 years, Dr. Valentin has developed a strong expertise on redfish, more specifically on issues related to species and population identification in the context of fishery management. Her work is based on a multidisciplinary approach, using several stock identification tools such as genetics and geometric morphometrics.



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2010 REDFISH SYMPOSIUM ORGANIZING PARTNERS
**NORTHEAST CONSORTIUM - SPONSOR**

The Northeast Consortium was created in 1999 to encourage and fund effective, equal partnerships among commercial fishermen, scientists, and other stakeholders to engage in collaborative research and monitoring projects in the Gulf of Maine and Georges Bank. The Northeast Consortium consists of four research institutions - University of New Hampshire, University of Maine, Massachusetts Institute of Technology, and Woods Hole Oceanographic Institution - working together to foster this initiative.

Northeast Consortium . Institute for the Study of Earth, Oceans and Space
University of New Hampshire . 8 College Road, 142 Morse Hall . Durham, NH 03824 USA
www.northeastconsortium.org

**NEW HAMPSHIRE SEA GRANT COLLEGE PROGRAM
UNIVERSITY OF NEW HAMPSHIRE**

Operating under the guidelines of, and in partnership with, the National Sea Grant Program of the National Oceanic and Atmospheric Administration (NOAA) NH Sea Grant is a federally funded program of marine research, education and extension. These development and conservation of marine and coastal resources of New Hampshire, northern New England and the Nation.

New Hampshire Sea Grant College Program . Chase Ocean Engineering Laboratory
University of New Hampshire . 24 Colovos Road . Durham, New Hampshire 03824 USA
www.seagrant.unh.edu

**NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA)
NATIONAL MARINE FISHERIES SERVICE (NMFS)**

NOAA's Fisheries Service is the federal agency responsible for the stewardship of the nation's living marine resources and their habitats. NOAA fisheries manages, conserves and protects fish, shellfish, whales, dolphins, sea turtles and other living creatures in the oceans.

As a world class science agency that serves the entire country, it is their mission to ensure healthy fisheries for the benefit of all Americans. Federally managed living marine resources provide an important source of food and recreation for the nation, as well as thousands of jobs and a traditional way of life for many coastal communities. NMFS works to promote sustainable fisheries and to prevent the lost potential associated with overfishing, diminished resources and degraded habitats. They strive to balance competing public needs and interests in the use and enjoyment of our ocean and coastal resources. They carry out their stewardship and responsibilities through scientific programs, including sustainable fisheries, protected species, seafood safety inspection, aquaculture, enforcement and habitat conservation.

NOAA Fisheries . National Marine Fisheries Service . Northeast Fisheries Science Center
166 Water Street . Woods Hole, Massachusetts 02543 USA
www.nefsc.noaa.gov



MASSACHUSETTS DIVISION OF MARINE FISHERIES

The Massachusetts Division of Marine Fisheries provides wealth and benefits to all citizens of Massachusetts by managing the Commonwealth's living marine resources and the sustainable harvesting of those resources by commercial and recreational fisheries, maintaining a diverse number of self-sustaining fish populations at healthy levels of abundance in balance with the ecosystem.

Massachusetts Division of Marine Fisheries . 251 Causeway Street, Suite 400
Boston, MA 02114 USA
www.mass.gov/dfwele/dmf/



UNIVERSITY OF MASSACHUSETTS DARTMOUTH - SMAST

The School for Marine Science and Technology (SMAST) is the marine campus of the University of Massachusetts Dartmouth. It is located in the historical city of New Bedford, America's premier fishing port. Scientists at SMAST have expertise in ocean modeling and monitoring, fisheries science and management, coastal systems science, ocean acoustics, biogeochemistry, remote sensing, and ocean engineering.

School for Marine Science and Technology . University of Massachusetts Dartmouth
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www.smast.umassd.edu



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GENERAL NOTES FOR GUIDANCE**Registration**

The Symposium Registration Desk will be open throughout the day. The Laurinda Sousa Smith, Symposium Coordinator, will be available to speakers and registrants to assist with any questions or concerns that may arise.

Computer and Internet Access

The Crowne Plaza is equipped with multiple computer stations available for attendees' use in the hotel lobby with complimentary internet access.

Meals & Breaks

A continental breakfast will be provided from 8-9 a.m. A lunch buffet will be provided from Noon-1:30 p.m. One break will be held in the afternoon. Breakfast, lunch and break refreshments are included in your registration.

NOTES FOR PRESENTERS**Loading onto Presentation Computer**

Please check with the Symposium Coordinator when you register and have your presentation ready to load onto the presentation computer in the symposium room. The Coordinator will confirm the time of your presentation when you register.

Verbal Presentations - Time Allocation

To allow the day to run smoothly, and in fairness to other speakers, please be ready to present your paper at the appointed time, which will be confirmed when you check in with the Symposium Coordinator, and adhere strictly to the time allocated. Please pay close attention to the time in order to take the podium in a timely manner when it is time for you to speak. The schedule of presentations is listed on page 6 of this programme.

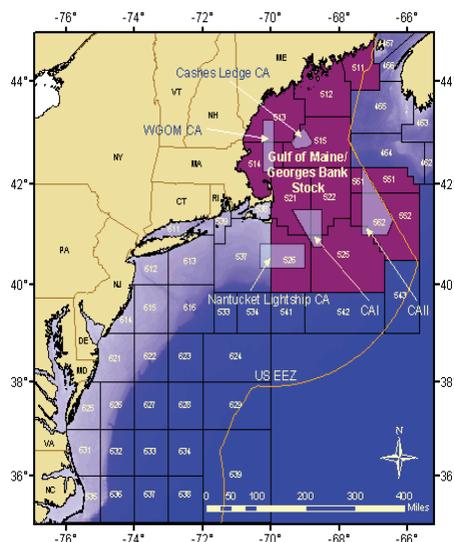


Figure 3.1. Statistical areas used to define the Gulf of Maine/Georges Bank Acadian redfish stock.

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| Thursday, 4 November 2010 | |
|--|--|
| Time | Presentation |
| 8:00 - 9:00 | Registration and Continental Breakfast |
| 9:00 | Welcome and Opening Remarks |
| Session 1: Status of the Resource and Biological Considerations | |
| 9:10 - 9:30 | Tim Miller, Northeast Fisheries Science Center - NOAA Fisheries <i>Assessment and Status of the US Gulf of Maine-Georges Bank Acadian Redfish Stock</i> |
| 9:30 - 9:50 | Steve Cadrin, University of Massachusetts - Dartmouth <i>Biology of Acadian Redfish and Implications for Optimum Yield in a Mixed-Species Fishery</i> |
| 9:50 - 10:10 | Morning Keynote Address Alexandra Valentin, Department of Fisheries and Oceans, Canada <i>Biological relevance of management units: The challenge of managing sympatric redfish species in the St. Lawrence system</i> |
| Session 2: Commercial Insights and Gear Selectivity | |
| 10:10 - 10:30 | Michael Walsh, Commercial Fisherman Michael Pol, Massachusetts Division of Marine Fisheries <i>Catching Redfish Past, Present, and Future: Commercial Insights and Gear Considerations</i> |
| 10:30-10:40 | Morning Break |
| 10:40-11:00 | Adam Baukus, Gulf of Maine Research Institute <i>Evaluating the practicality and economic viability of a pilot redfish jig fishery</i> |
| 11:00 - 12:00 | Facilitated Discussion Moderator: Ken La Valley, NH Sea Grant College Program |
| 12:00 - 1:30 | Lunch (provided on site) |
| 1:30 - 2:15 | Afternoon Keynote Address Kristjan Kristinsson, Marine Research Institute, Reykjavik, Iceland <i>A review of assessment and status of the Icelandic redfish fishery and implications for Gulf of Maine stock</i> |
| Session 3: Market Challenges and REDNET | |
| 2:15-2:35 | Dan Georgianna, University of Massachusetts - Dartmouth <i>Processing and Marketing Capacity for Acadian Redfish in New England</i> |
| 2:35-2:55 | Larry Ciulla, Gloucester Seafood Auction <i>Processing and Marketing Capacity for Acadian Redfish in New England: Part 2</i> |
| 2:55-3:10 | Afternoon Break |
| 3:10 - 3:30 | Kohl Kanwit, Maine Department of Marine Resources <i>REDNET: A network to redevelop a sustainable redfish (<i>Sebastes fasciatus</i>) trawl fishery in the Gulf of Maine</i> |
| 3:30 - 4:30 | Facilitated Discussion Moderator: Erik Chapman, NH Sea Grant College Program |
| 4:30 - 4:50 | Summary and Look to the Future Chris Glass, Northeast Consortium |
| 4:50 | Closing |
| 5:00 | Departure |

KEYNOTE ABSTRACT

KRISTJAN KRISTINSSON
MARINE RESEARCH INSTITUTE, REYKJAVIK, ICELAND

**A REVIEW OF ASSESSMENT AND STATUS OF THE ICELANDIC REDFISH
FISHERY AND IMPLICATIONS FOR GULF OF MAINE STOCK**

Redfish species have been an important fishery resource in Icelandic waters and adjacent waters. There are two species exploited, golden redfish (*Sebastes marinus*) and three stocks of deep-water redfish (*S. mentella*). One of the deep-water redfish, named Icelandic slope stock, inhabits the demersal habitats of the continental slope of Iceland. The other two stocks are found in the pelagic ocean of Irminger Sea and adjacent waters and are named shallow and deep pelagic stocks.

Historically, golden redfish has been the most important and has been exploited since the early 1920s. It was not until after World War II that the redfish fishery expanded and the fishery for Icelandic slope deep-water redfish started. There were quickly signs of overfishing of both species as redfish is very vulnerable to overfishing. In large part, their vulnerability is a product of their life history. A life history that is characterized by a long-lived, slow-growing, and late-maturing cycle.

Until 1977, redfish in Icelandic waters was mainly exploited by foreign fleet, mainly from Germany, operating in Icelandic waters. After the expansion of the EEZ to 200 nautical miles Iceland has been the only nation exploiting redfish within the Icelandic EEZ. The status of golden redfish is considered to be within safe biological limits. The biomass of the Icelandic slope deep-water redfish has been low but stable in the last years.

The international fishery of the two pelagic deep-water redfish stocks in the Irminger Sea and adjacent waters, including Icelandic waters, commenced in 1982 by the former Soviet Union. The fishery quickly expanded and more nations participated in the fishery. Iceland started to fish from these stocks in 1989, first from the shallow pelagic stock and then from the deep pelagic stock. The stocks are managed by the North East Atlantic Fisheries Commission (NEAFC), but there is no agreement among member nations about the management of the stocks and hence, no formal management plans. The stock size of both stocks has decreased since the fishery started, especially the stock size of the shallow pelagic stock. Very little directed fishery remains towards the shallow pelagic stock and the majority of effort is now on the deep pelagic stock.

In this talk I will review the fishery of both the golden and deep-water redfish species, their assessment, status of the stocks, and the management of these two species and draw parallels between the Gulf of Maine redfish and the Icelandic resource.



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KEYNOTE ABSTRACT**ALEXANDRA VALENTIN****DEPARTMENT OF FISHERIES AND OCEANS, MONT-JOLI, CANADA****BIOLOGICAL RELEVANCE OF MANAGEMENT UNITS:
THE CHALLENGE OF MANAGING SYMPATRIC REDFISH SPECIES IN THE
ST. LAWRENCE SYSTEM**

A directed redfish (*Sebastes* sp) fishery developed in the Gulf of St. Lawrence and in the Laurentian Channel outside the Gulf by the late fifties. Since then, the two commercial species, *Sebastes fasciatus* and *S. mentella*, were managed as one group because they are difficult to distinguish morphologically. In 1993 the management units were redefined to account for the winter migration of the Gulf redfish stock in the Cabot Strait area and divided as follows: Gulf of St. Lawrence - Unit 1 (4RST, 3Pn4Vn [Jan. to May]); Laurentian Channel - Unit 2 (3Ps4Vs4Wfgj, 3Pn4Vn [June to Dec.]). In 1995, Unit 1 was placed under moratorium to directed fishing due to stock collapse, while Unit 2 continues to support a fishery. Uncertainties remained about the amount of exchange among management units and the industry of the Gulf of St. Lawrence expressed concerns regarding the possible impacts of the continuing fishing in Unit 2 on redfish recovery in Unit 1. Redfish is characterised by extensive variability in recruitment with tractable pulses that generally occurs at an interval of 5-12 years. However, strong recruitment has not been observed in Unit 1 since the beginning of the 1980s and some year-classes that appeared strong at young ages in research surveys subsequently disappeared before contributing significantly to the fishery in Unit 1 and contributed only marginally in Unit 2.

From 1995, research efforts focussed on the species identification and stock structure issues, using a multidisciplinary approach. The biological data (genetics, meristics, morphometrics, and otolith chemical signature) suggested that (i) Unit 1 and 2 correspond to an area of introgressive hybridization between the two species and (ii) Units 1 and 2 correspond to a single biological population of each species. Additional DNA analyses of archived otoliths collected on specimens from strong year-classes showed that recruitment mechanisms are different between the two species. The last strong year-class that has supported the fishery for more than 20 years in Unit 1 belonged to *S. mentella* and expressed the genetic signature of Units 1 and 2. Strong year-classes that have disappeared before contributing significantly to the fishery belonged to *S. fasciatus*. These year-classes originated from the southern margin of the Grand Banks, suggesting possible interactions with other management units.

Zonal advisory processes recommended that (i) the two species be assessed separately and (ii) Units 1 and 2 be grouped as a single biological unit for each of the two species and assessed as such. Such assessment was made in 2009. It was determined that annual typical (as opposed to pulse) recruitment is stable and low and has not resulted in an increase of the population, whose biomass remains low. It was recommended to keep low exploitation rate for both species. It was also recommended to concentrate the exploitation in the shallower waters and along the edge of the outer shelf, where *S. fasciatus* is dominant. Such a strategy should reduce exploitation on *S. mentella*, which status is of greater concern. Monitoring species in the commercial fishery in the combined Unit 1&2 was also initiated in 2010.

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SESSION 1: STATUS OF THE RESOURCE AND BIOLOGICAL CONSIDERATIONS

Assessment and Status of the US Gulf of Maine-Georges Bank Acadian Redfish Stock

Timothy J. Miller
Northeast Fisheries Science Center
Woods Hole, MA 02540

From the 1930s through the 1970s, Acadian redfish supported a substantial domestic commercial fishery in the Gulf of Maine and on Georges Bank. Since the stock's collapse in the 1980s, there has been little targeted fishing effort. In 2001, the stock was determined to be overfished with a rebuilding plan begun in 2004 as part of Amendment 13 to the Multispecies Fisheries Management Plan. The last assessment of Acadian redfish in 2008 determined that the stock was still overfished although it was projected to be rebuilt with high probability in 2011 with current levels of fishing. Recovery was projected to occur more quickly than expected due to healthy recruitment and lack of any significant fishing pressure for a protracted period of time. Preliminary results from the same model used in the most recent assessment, but updated with survey indices and catches through 2009, suggest that the stock has been recovering as predicted by the 2008 assessment.

Contact: timothy.j.miller@noaa.gov

Biology of Acadian Redfish and Implications for Optimum Yield in a Mixed-Species Fishery

Steve Cadrin
University of Massachusetts, School for Marine Science and Technology
200 Mill Road, Suite 325
Fairhaven, MA 02719 U.S.A.

The New England fishery for Acadian redfish (*Sebastes fasciatus*) is managed as part of the mixed-species demersal fishery. The fishery was traditionally managed according to the status of principal groundfish species: Atlantic cod (*Gadus morhua*), haddock (*Melanogrammus aeglefinus*) and yellowtail flounder (*Limanda ferruginea*), and recent management of each stock remains largely focused on gadoid and flatfish species. However, the life history of redfish differs from that of other species

in the fishery in several important ways. The live-bearing reproductive strategy of redfish (ovovivipary) is associated with much lower fecundity than other gadoid and flatfish species and may involve compensatory forms of density dependent stock-recruit relationships. Redfish have much greater longevity, lower natural mortality rate and slower growth than other New England groundfish. The life history strategy of redfish makes it more vulnerable to overfishing and less resilient than other species in the fishery. Although the history of the New England redfish fishery includes serial depletions that are consistent with life history expectations, recent stock rebuilding and strong recruitment offer prospects for a productive and sustainable fishery. Life history information is considered in the overfishing limit (50% of maximum spawning potential in comparison to 40% for other groundfish), but the fishing mortality rate associated with overfishing is much less than that for other species. Therefore, mixed-species fishing effort is more likely to overfish redfish than other species. If redfish are targeted with smaller mesh that is commensurate with their relatively small size at maturity, then the opposite problem of incidental bycatch of immature sizes of other species (e.g., cod and pollock, *Pollachius virens*) should be considered. Based on the biology of redfish as compared to life histories of other New England groundfish and experience from other mixed-species demersal fisheries including *Sebastes* species, redfish should be selectively targeted, and managed within sustainable catch limits to achieve optimum yield.

Contact: scadrin@umassd.edu

Session 2: Commercial Insights and Gear Selectivity

Catching Redfish Past, Present, and Future: Commercial Insights and Gear Considerations

Capt. Michael Walsh and
Michael Pol
Massachusetts Division of Marine Fisheries
1213 Purchase Street, 3rd Floor
New Bedford, MA 02740

We present Capt. Walsh's experience and insights from fishing for redfish in the past, present, and future. Redfish fishing has changed a lot over the years. Once, trawls with small mesh might very large quantities, filleted by hand on land, and sold in large quantities to the US Army. For several years, redfish

were rarely found and rarely fished for. Today, we can make a profitable trip using a codend with 6.5 inch diamond mesh, selling a few thousand pounds to a year-round limited market; however, the mesh size is mismatched to the fishery and threatens sustainability because too many fish escape the large meshes and die. While a very large quota is available, current markets are fully satisfied. A future sustainable redfish trawl fishery must look carefully at the gear, especially the codend mesh size, and markets, and include the historic and present day experience of commercial fishermen to develop a useful and effective research plan.

Contact: mike.pol@state.ma.us

Evaluating the practicality and economic viability of a pilot redfish jig fishery

Adam Baukus, Kristin Garabedian, Steve Eayrs
Gulf of Maine Research Institute
350 Commercial Street
Portland, ME 04101

An NEC development project was designed to explore the feasibility of reviving the Acadian redfish (*Sebastes fasciatus*) fishery in downeast Maine. Addressing the situation from both fishing and marketing perspectives, we i) completed ten single day trips based out of Swans Island Maine, using automatic jigging machines to target redfish, and ii) developed an online survey for local restaurants and seafood distributors to assess their interest and current knowledge of the product. Despite a wide range of sampling sites in July and August no large schools of redfish were encountered, resulting in minimal landings. While no significant amounts of fish were



Photo by Adam Baukus

landed, insights were gained into the advantages (i.e. versatility, ease of use, and potentially low bycatch/habitat impact) and disadvantages (i.e. maintenance complexity and limited landings) of using automatic jigging machines to target redfish. Responses to the questionnaire were received from only seven out of forty five surveys. Respondents indicated an interest in pursuing a redfish market at prices above current levels, but that there is an overall lack of information about the fishery including harvest method, quality of landed product, and uncertainty of public demand. Given that other groundfish species are scarce in the downeast region, the possibility of efficiently targeting redfish and obtaining a higher market price warrants further research on both methodology and marketing fronts. (Northeast Consortium Project Development Grant 2010)

Contact: abaukus@gmri.org

Session 3: Market Challenges and REDNET

Processing and Marketing Capacity for Acadian Redfish in New England

Dan Georgianna
Department of Fishery Oceanography
School for Marine Science and Technology
University of Massachusetts Dartmouth
200 Mill Road, Suite 325
Fairhaven, MA 02719 U.S.A.

New England landings of Acadian Redfish declined continuously from about 100,000 mt in the early 1950s to less than 300 mt in the late 1990s. For most of this period, Redfish was frozen and sold as frozen fillets and other frozen products as Ocean Perch to markets in the Midwest. Starting in the mid-1980s, landings continued their decline but exvessel price increases indicate that redfish were predominantly sold as fresh fillets and other higher priced products. Since 2006, landings have increased about 40% per year without an appreciable decline in exvessel prices, indicating strong demand for the product. Anecdotal and statistical data show that the market is very thin, i.e. short-term increases in landings beyond market capacity drive exvessel prices significantly lower. More sustained increases in landings may increase processing and market capacity. Developing processing and marketing capacity, however, is an investment that requires funding, usually generated by lower ex-vessel prices or short-term losses for processors or both. As with any investment, financing investment

generate returns if demand and supply increase in step with each other.

Contact: *dgeorgianna@umassd.edu*

Processing and Marketing Capacity for Acadian Redfish in New England: Part 2

Larry Ciulla
President
Gloucester Seafood Display Auction
Gloucester, Ma 01930

The United States largest supply of Redfish comes from Canada in fillet form. To be competitive against Canada the US fishing vessels will have to accept a conservative price to break into the market place to take advantage of the existing market demand that the US currently has for redfish. As the industry continues to move forward with the 'catch share' system a concern for redfish is whether or not the ex-vessel price is enough to satisfy fishers to target this species. As consolidation begins in our industry will there be enough vessels to target redfish at the amount needed to fulfill the demand of the market place. With the new 'catch share' regulatory program in place there appears to be a large enough quota of redfish to supply the demand. However, the infrastructure to process the large quota is non existent compared to Canada. US falls short in terms of a skilled labor force which is used in Canada. This means the US infrastructure would need funds to buy equipment and process the redfish from start to finish. Also, in a regulatory practice where emergency rules can with little warning shut down species, developing a sustainable market place for redfish and generate enough outside private interest to fund these types of projects will be challenging. Success of a redfish fishery will ultimately depend on consistent quota levels to supply consistent demand while creating a stable and profitable price point to generate vessel, processors and market interest.

Contact: *Larry Ciulla, 978-281-1544*

REDNET: A network to redevelop a sustainable redfish (*Sebastes fasciatus*) trawl fishery in the Gulf of Maine

Kohl Kanwit
Maine Department of Marine Resources
P.O. Box 8
West Boothbay Harbor, ME 04575

The National Marine Fisheries Service's Northeast Cooperative Research Program (NCRP) recently awarded funding to a collaborative project entitled "REDNET". The goal of this project is to devise strategies and means to sustainably harvest the redfish resource in the Gulf of Maine through a network approach including: the fishing industry, gear manufacturers, researchers, social and economic experts, and fishery managers. The network will define the pathway for conceiving, developing and implementing research and development and outreach strategies to sustainably access the redfish resource under the current sector and Allowable Catch Limit (ACL) regime. The vision is a comprehensive, integrated, well-planned project where the intent of every step is toward an environmentally and economically sustainable redfish fishery. The proposed work includes several components: catch and bycatch assessment, mesh size evaluation and optimization for targeted catch retention and elimination of juvenile redfish, bycatch reduction, processing and marketing evaluation and strategies, and finally outreach and implementation of the project results. The anticipated results of the project are defined gear type(s) and/or time/area combinations that maximize the long-term benefit from the resource while minimizing negative impacts, thereby providing a means to achieve the ACL for a rebuilt, but largely inaccessible, redfish resource. Historically, redfish represented a significant fishery in the region peaking in 1951 with landings over 117,000 mt. Landings steadily declined to a low of just over 1,000 mt in 2008. Low biomass levels combined with increasing minimum mesh size restrictions between 1980 and 1995 nearly eliminated the prosecution of a directed redfish fishery in the Northeastern United States. The most recent stock assessment of redfish was completed at the Groundfish Assessment Review Meeting III and it indicated that redfish is not overfished and overfishing is not occurring. The ACL for redfish is the third largest allocation in 2010 at 6,848 mt only next to Gulf of Maine cod (7,240 mt) and Georges Bank haddock (40,440 mt). While recent report indicates that commercial quantity of catch is possible with the existing 6.5" codend mesh size, it is

uncertain whether the mesh size is the optimal choice for sustainable exploitation of the resource. Furthermore, current targeting practices using large mesh codend can be wasteful due to unknown escapee mortality. If multispecies sector management is to be successful, the fleet must be able to catch and land stocks of high abundance while exercising their ability to avoid limiting species with very low allocations. The best way to reach this goal is through a network of highly capable individuals, each contributing their expertise toward achieving a mutually agreed upon final outcome. REDNET will take this approach for the redfish resource.

Contact: kohl.kanwit@maine.gov



Photo by Kristen Garabedian

